

REMARKS

The application is believed to be in condition for allowance. Responsive to the requirement for election of species, applicants previously elected Species 1, corresponding to Figure 2.

Claim Rejections - 35 USC § 112

Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejection states that claim 6 is dependent on canceled claim 3 and is thus indefinite, and that claims 4 and 6 recite the same limitations so the examiner recommends the Applicant cancel claim 6.

Claims 6-7 are cancelled without prejudice.

Withdrawal of the rejection is solicited.

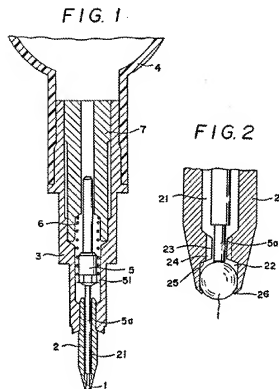
Claim Rejections - 35 USC § 102

I. Claim 1 stands rejected under 35 U.S.C. 102(b) as being anticipated by Okamoto et al. (US 5,277,510), hereinafter Okamoto.

II. Claims 1, 4, 6 and 8 stand rejected under 35 U.S.C. 102(b) as being anticipated by Fukushima (US 6,220,774).

Traverse

I. Okamoto Figures 1-2 are reproduced below.



Okamoto discloses a conventional ball pen tip comprising the housing 2, the ball 1, the cavity 22 (housing the ball), and the capillary hole 23 (not to be confused with the capillary channels 24).

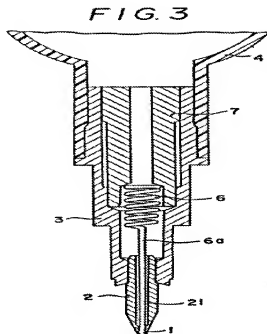
Element 21 is the back hole. Element 21 doesn't have any capillary effect, since its diameter is too big.

Hole 23 would need to be the capillary element.

The rejection offers element 21 as a capillary channel within the tip. This is incorrect as the diameter of 21 is too big for any capillary action.

The rejection offers element 3 as the recited hole (that is, the hollow interior of element 3 is offered as the hole; see Fig. 3). The claim recites a hole within the tip, the hole connected to the capillary channel.

Element 3 does not satisfy the "hole" recitation.



As can be readily seen from the figure, element 3 is not part of the tip. Element 3 does not satisfy the recitation of "a hole (10) within the tip and connected to the capillary channel;".

Figure 3 is not really pertinent with the claimed invention, since the spring therein is external to the tip. The spring, as recited in claim 1, is in a different hole with respect to the hole (10) provided in the tip.

The rejection states that Okamoto discloses "a narrow section of a locally radially decreased cross-section within the capillary channel, coming into contact with the said straight portion (6a) of the spring (6)". See Figures 2-3 above.

Applicant disagrees.

Again, as seen in Figure 2, back hole 21 is not a capillary element (due to its large size).

Only hole 23 could be the capillary element.

Within hole 23 there is no "narrow section of a locally radially decreased cross-section".

Rather, in Okamoto the capillary hole 23 is always shown as cylindrical and of constant diameter.

In the claimed invention, it is this portion 23 that is made with 2 different diameters (as recited), so that it is finally very close to the spring straight portion, much closer than what is shown in Figure 2 of Okamoto.

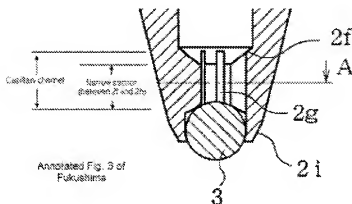
Okamoto does not disclose the recited capillary channel with two diameters (i.e., with a locally narrow section).

Okamoto therefore does not anticipate.

II. The same defects are true for Fukushima.

Claim 1 recites a capillary channel within a tip.

Below is the rejection's annotated Figure 3.

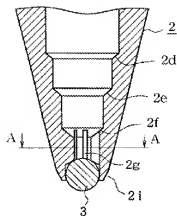


The rejection states that "a narrow section locally radially decreased cross-section within the capillary channel". The rejection's annotation of Figure 3 incorrectly identifies the capillary channel.

In Fukushima only the portion inside the capillary hole 2g has a diameter small enough so that there is a capillary effect.

If there is no capillary effect, the element cannot be said to be a capillary channel.

FIG.3



The rejection states that "a narrow section locally radially decreased cross-section within the capillary channel".

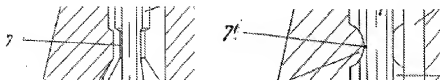
Fukushima's Figure 3 clearly show 2d, 2e, 2f, that are part of the back hole, without any capillary effect, which means that they are too big to create whatever capillary effect.

Elements 2d, 2e, and 2f cannot satisfy the capillary channel recitation.

More in detail, element 2f is not a part of the capillary hole. Rather, element 2f is the final part of the back hole, being too big to have the capillary effect.

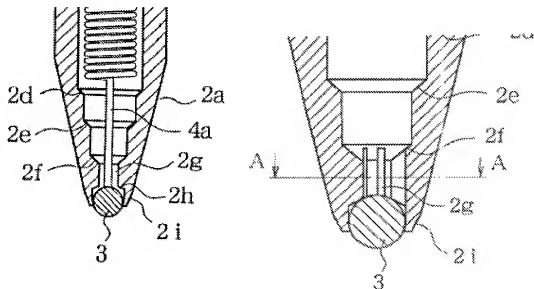
Only element 2g (ink passage 2g) would satisfy the recited capillary channel.

See the below excerpt from Figures 2-3 of the present application.



The present claims recites a narrow section of a locally radially decreased cross-section (7,7') within the capillary channel coming into contact with the straight portion (6r) of the spring (6), the narrow section (7, 7') preventing the straight portion of the spring from becoming inclined with respect to the longitudinal axis (N-N) of the ball-point pen (1).

This is not the case in Fukushima. A portion of Fukushima Figures 2-3 are reproduced below.



Capillary hole diameter 2g (See above) is clearly much bigger than the spring straight portion 4a in the Figure 2, so that the spring can radially move inside the capillary hole 2g.

Even if this is not the case, there is no locally radially decreased cross-section in Fukushima element 2g. Rather, the diameter is constant along the entire length of element 2g.

Regarding claim 4, again the rejection states that there is disclosed "a cylindrical shaped section".

Element 2g may be cylindrical shaped. However, element 2g does not include a locally narrow section that is a cylindrical shaped restriction.

Thus, Fukushima does not anticipate.

Summary

In summary, since the references each have a capillary channel having a only a single, constant diameter, neither reference teaches a capillary channel within the tip, that capillary channel having a narrow section of a locally radially decreased cross-section coming into contact with the straight portion of the spring and thereby preventing the straight portion of the spring from becoming inclined with respect to the longitudinal axis of the ball-point pen. The two-diameter capillary channel is neither taught nor suggested by the prior art.

Reconsideration and allowance of the claims are therefore respectfully requested.

Should there be any matters that need to be resolved in the present application; the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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